<center>**REMARKS/ARGUMENTS**</center>

Claims 1-3, 7-15, 17-20, 24-34, and 37-40 are pending in the present application. Claims 1, 18, 24, and 34 are amended. Claims 37-40 are added. The listing of the claims beginning on page 2 of this response replaces all prior versions, and listings, of claims in the application.

Applicants do not concede that the originally filed claims are not patentable over the art cited by the Examiner, as the present claim amendments and cancellations are included only to facilitate expeditious prosecution. Applicants respectfully reserve the right to pursue these and other claims in one or more continuations and/or divisional patent applications.

I.   Objection to Claims

The Examiner has stated that claim 24 was objected to because of the following informality:

> Claim 24 is objected because it improperly depends on claim 21, which is cancelled. For purpose of examination, claim 24 is treated as it depends on claim 18.

Office Action dated January 11, 2007, p. 2.

In response, the claim has been amended to overcome this objection. Withdrawal of the rejection is respectfully requested.

II.   35 U.S.C. § 101

The Examiner has rejected claims 1-36 under 35 U.S.C. § 101 as being directed towards non-statutory subject matter.

In response to the Examiner's rejection, the Applicants have amended the claims in accordance with the Examiner's suggestions. In light of the amendments to the claims, withdrawal of the rejection is respectfully requested.

III.   35 U.S.C. § 103, Obviousness (Claims 1, 10, 17, 18, 27, 33, and 34)

The Examiner has rejected claims 1, 10, 17, 18, 27, 33, and 34 under 35 U.S.C. § 103 as being unpatentable over Cousins et al., U.S. Patent Application Publication No. 2002/0107866 (hereinafter "*Cousins*") in view of Lee et al., U.S. Patent Application Publication No. 2003/0085823 (hereinafter "*Lee*"). This rejection is respectfully traversed.

In rejecting the claims, the Examiner states:

> As to claims 1, 34, Cousins teaches a method, in a data processing system, for reducing the size of an object (i.e. By compressing the markup language files using the method of the present invention, one can obtain approximately 15% to 20% reduction in the size of the file, [0019]), the method comprising:
> dividing an object (i.e. markup language files) into a plurality of blocks (i.e. tags, attributes of the tags, white spaces ,text) ([0011-0014);
> identifying similar blocks (i.e. "<table> " and "<TABLE> ", [0015]) within the plurality of blocks ([0011-0015); and
> identifying identical blocks (i.e. white spaces) within the plurality of blocks; and
> suppressing (i.e. eliminated) the identical blocks without differential compression the identical blocks (i.e. white spaces and end-of-line characters are eliminated to decrease the size of the file, [0011);
> performing data compression on at least one block within the plurality of blocks, wherein the at least one block is not differentially compressed (i.e. GZIP compression algorithm, [0011]), wherein the at least one block is not suppressed, and wherein the step of performing data compression on the at least one block forms a reduced object (i.e. By compressing the markup language files using the method of the present invention, one can obtain approximately 15% to 20% reduction in the size of the file, [0019]); and
> storing the reduced object in a computer readable media (i.e. The Internet has made a voluminous amount of documents stored on computers around the world readily available to anyone having a computer, [0003]).
> Cousins does not specifically teach differentially compressing the similar blocks.
> However, Lee teaches differentially compressing the similar blocks (i.e. The data compressor receives a series of N data elements, where N is a positive integer, and computes respective differences between two adjacent data among the data. When the differences are all less than a reference value, the data compressor generates delta data on the basis of the differences, receives a series of N new data elements the series of the prior data, and returns to the step of computing the differences, [0045]).
> It would have been obvious to one of ordinary skill of the art having the teaching of Cousins and Lee at the time the invention was made to modify the system of Cousins to include the limitations as taught by Lee. One of ordinary skill in the art would be motivated to make this combination in order to generate the delta data comprises converting the differences between the two adjacent data

into the corresponding delta values, and concatenating the delta values in series to generate the delta values in view of Lee, as doing so would give the added benefit of providing a better method for compressing data, which can improve the compression efficiency when the differences between the adjacent data elements are small as taught by Lee ([0043-0046]).

Office Action dated January 11, 2007, pp. 4-6.

The Examiner bears the burden of establishing a *prima facie* case of obviousness based on prior art when rejecting claims under 35 U.S.C. § 103. *In re Fritch*, 972 F.2d 1260, 23 U.S.P.Q.2d 1780 (Fed. Cir. 1992). The prior art reference (or references when combined) must teach or suggest all the claim limitations. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). In determining obviousness, the scope and content of the prior art are… determined; differences between the prior art and the claims at issue are… ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background the obviousness or non-obviousness of the subject matter is determined. *Graham v. John Deere Co.*, 383 U.S. 1 (1966). "Often, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue." *KSR Int'l. Co. v. Teleflex, Inc.*, No. 04-1350 (U.S. Apr. 30, 2007). "*Rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.* Id. (citing *In re Kahn*, 441 F.3d 977, 988 (CA Fed. 2006))."

The Applicants have amended the independent claims. Support for the claim amendments can be found in Figure 6 of the as-filed specification, as well as the textual descriptions thereof. Amended claim 1 is as follows:

     1.   A method, in a data processing system, for reducing the size of an object, the method comprising:
          dividing an object into a plurality of blocks, wherein each block of the plurality of blocks comprises a plurality of features, each of the plurality of features corresponding to one of a plurality of fingerprints;
          calculating a super fingerprint for each of the plurality of blocks to form a plurality of super fingerprints, wherein each of the set of the super fingerprints is calculated by merging ones of the plurality of fingerprints for a particular block of the plurality of blocks;
          responsive to dividing the object into the plurality of blocks, identifying identical blocks within the plurality of blocks;

suppressing the identical blocks without differentially compressing the identical blocks;

responsive to suppressing the identical blocks without differentially compressing the identical blocks, identifying similar blocks within the plurality of blocks;

differentially compressing the similar blocks;

performing data compression on at least one block within the plurality of blocks, wherein the at least one block is not differentially compressed, wherein the at least one block is not suppressed, and wherein the step of performing data compression on the at least one block forms a reduced object; and

storing the reduced object in a computer storage readable media.

In the Decision on Appeal, dated April 13, 2011, the Board specifically noted that the claims on appeal did not set forth any relationship between resemblance processing and the identical block processing. Among other amendments, the Applicants have amended claim 1 to recite a relationship between resemblance processing and the identical block processing. Support for the claim amendments can be found in Figure 6 and the supporting textual description thereof of the as-filed specification.

In light of the amendments to the claims, the Applicants respectfully submit that claim 1 is no longer made obvious by *Cousins* in view of *Lee*. Withdrawal of the rejection is respectfully requested.

Furthermore, new claims 37-40 have been added to further clarify the relationship between the relationship between resemblance processing and the identical block processing. The Applicants respectfully submit that claims 37-40 are also not made obvious by *Cousins* in view of *Lee*.

Independent claims 18 and 34 have been amended to recite features similar to those found in amended claim 1. Therefore, by reasons similar to those presented in regard to claim 1, *Cousins* in view of *Lee* also does not make claims 18 and 34 obvious under 35 USC 103(a). Withdrawal of the rejection is respectfully requested.

Claims 10 and 17 depend from claim 1. Claims 27 and 33 depend from claim 18. By virtue of their dependence from the independent claims, these claims are also not made obvious under 35 USC 103(a) by *Cousins* in view of *Lee*. Withdrawal of the rejection is respectfully requested.

IV.   35 U.S.C. § 103, Obviousness (Claims 2 and 19)

The Examiner has rejected claims 2 and 19 under 35 U.S.C. § 103 as being unpatentable over Cousins, in view of Lee, and further in view of Riggs et al., U.S. Patent Application Publication No. 2004/0199669 (hereinafter "*Riggs*"). This rejection is respectfully traversed.

In rejecting the claims, the Examiner states:

> As to claims 2, 19, Cousins and Lee do not specifically teach the plurality of blocks are fixed in size.
> However, Riggs teaches the plurality of blocks are fixed in size (i.e. 2 MB sized block, [0029]).
> It would have been obvious to one of ordinary skill of the art having the teaching of Cousins, Lee and Riggs at the time the invention was made to modify the system of Cousins and Lee to include the limitations as taught by Riggs. One of ordinary skill in the art would be motivated to make this combination in order to asynchronously compress each block in accordance with a preselected compression utility in view of Riggs, as doing so would give the added benefit of allowing for rapid compression and decompression asynchronously of file blocks as taught by Riggs ([0029]).

Office Action dated January 11, 2007, p. 8.

The obviousness rejections are predicated upon the assertions made with respect to *Cousins* in view of *Lee*. As proved above, the underlying assertions made by the Examiner regarding *Cousins* in view of *Lee's* teachings are incorrect vis-à-vis the independent claims. For this reason, *Cousins* in view of *Lee* does not teach all of the features of claims 2 and 19, at least by virtue of their dependence on the independent claims. For the similar reasons, *Cousins* in view of *Lee* does not suggest all of the features of claims 2 and 19.

Additionally, *Riggs* does not teach or suggest the claim features shown to be deficient from *Cousins* in view of *Lee*. The Examiner does not assert otherwise. Instead, *Riggs* is cited only for disclose the claim features of claims 2 and 19. *Riggs* is wholly unrelated to the inventions of the independent claims and, accordingly, is wholly unrelated to claims 2 and 19. *Riggs* is devoid of disclosure regarding the feature the Examiner asserts to be found in *Cousins* in view of *Lee*.

As shown above, none of *Cousins, Lee, Riggs*, or a combination thereof, teach or suggest all of the features of claims 2 and 19, at least by virtue of their dependency on the corresponding independent claims. Therefore, the proposed combination of these references when considered together as a whole does not teach or suggest all of the features of claims 2 and 19. For this reason, the cited art does not present a prima facie obviousness rejection against these claims.

V.   35 U.S.C. § 103, Obviousness (Claims 3, 7-9, 15, 20, 24-26, and 32)

The Examiner has rejected claims 3, 7-9, 15, 20, 24-26, and 32 under 35 U.S.C. § 103 as being unpatentable over Cousins, in view of Lee, and further in view of Wightman, U.S. Patent No. 5,850,565 (hereinafter "*Wightman*").

In rejecting the claims, the Examiner states:

> As to claims 3, 20, Cousins and Lee do not explicitly teach the plurality of blocks are variable in size and determined based on characteristics of content of the object.
>
> Wightman teaches the plurality of blocks are variable in size and determined based on characteristics of content of the object (i.e. dividing the input file into portions of respective non-preset sizes, col. 12, lines 25-30).
>
> It would have been obvious to one of ordinary skill of the art having the teaching of Cousins, Lee and Wightman at the time the invention was made to modify the system of Cousins and Lee to include the limitations as taught by Wightman. One of ordinary skill in the art would be motivated to make this combination in order to select the strings that are likely to be most amenable to delta compression in view of Wightman (col. 2, line 49-62), as doing so would give the added benefit of performing the improved data compressor that uses variable-length strings and is therefore free of these restrictions as taught by Wightman (col. 3, lines 32-39).

Office Action dated January 11, 2007, p. 9.

The obviousness rejections are predicated upon the assertions made with respect to *Cousins* in view of *Lee*. As proved above, the underlying assertions made by the Examiner regarding *Cousins* in view of *Lee's* teachings are incorrect vis-à-vis the independent claims. For this reason, *Cousins* in view of *Lee* does not teach all of the features of claims 3, 7-9, 15, 20, 24-26, and 32, at least by virtue of their dependence on the independent claims. For the similar reasons, *Cousins* in view of *Lee* does not suggest all of the features of claims 3, 7-9, 15, 20, 24-26, and 32.

Additionally, *Wightman* does not teach or suggest the claim features shown to be deficient from *Cousins* in view of *Lee*. The Examiner does not assert otherwise. Instead, *Wightman* is cited only for disclose the claim features of claims 3, 7-9, 15, 20, 24-26, and 32. *Wightman* is wholly unrelated to the inventions of the independent claims and, accordingly, is wholly unrelated to claims 3, 7-9, 15, 20, 24-26, and 32. *Wightman* is devoid of disclosure regarding the feature the Examiner asserts to be found in *Cousins* in view of *Lee*.

As shown above, none of *Cousins*, *Lee*, *Wightman*, or a combination thereof, teach or suggest all of the features of claims 3, 7-9, 15, 20, 24-26, and 32, at least by virtue of their dependency on the corresponding independent claims. Therefore, the proposed combination of these references when considered together as a whole does not teach or suggest all of the features of claims 3, 7-9, 15, 20, 24-26, and 32. For this reason, the cited art does not present a prima facie obviousness rejection against these claims.

VI.   35 U.S.C. § 103, Obviousness (Claims 11, 12, 28, and 29)

The Examiner has rejected claims 11, 12, 28, and 29 under 35 U.S.C. § 103 as being unpatentable over Cousins, in view of Lee, and further in view of McCanne et al., U.S. Patent Application Publication No. 2004/0174276 (hereinafter "*McCanne*").

In rejecting the claims, the Examiner states:

> As to claims 11, 28, Cousins and Lee do not specifically teach identifying one or more features includes calculating one or more fingerprints for the plurality of blocks.
> However, McCanne teaches identifying one or more features includes calculating one or more fingerprints for the plurality of blocks (i.e. the function evaluates to 1 for a given fingerprint having a given offset and window, [0049]).
> It would have been obvious to one of ordinary skill of the art having the teaching of Cousins, Lee and McCanne at the time the invention was made to modify the system of Cousins and Lee to include the limitations as taught by McCanne. One of ordinary skill in the art would be motivated to make this combination in order to determining whether the offset is to be designated as a cut point and segmenting the input data as indicated by the set of cut points in view of McCanne, as doing so would give the added benefit of providing the compression that can potentially make it feasible to use a low bandwidth link for high bandwidth applications since it reduces the number of actual bits required to represent a larger input sequence. Similarly, compression can potentially enhance performance or capacity of a file system by reducing the number of bits required to represent all of the files in the system as taught by McCanne ([0009]).

Office Action dated January 11, 2007, pp. 12-13.

The obviousness rejections are predicated upon the assertions made with respect to *Cousins* in view of *Lee*. As proved above, the underlying assertions made by the Examiner regarding *Cousins* in view of *Lee's* teachings are incorrect vis-à-vis the independent claims. For this reason, *Cousins* in view of *Lee* does not teach all of the features of claims 11, 12, 28, and 29, at least by virtue of their dependence on the independent claims. For the similar reasons, *Cousins* in view of *Lee* does not suggest all of the features of claims 11, 12, 28, and 29.

Additionally, *McCanne* does not teach or suggest the claim features shown to be deficient from *Cousins* in view of *Lee*. The Examiner does not assert otherwise. Instead, *McCanne* is cited only for disclose the claim features of claims 11, 12, 28, and 29. *McCanne* is wholly unrelated to the inventions of the independent claims and, accordingly, is wholly unrelated to claims 11, 12, 28, and 29. *McCanne* is devoid of disclosure regarding the feature the Examiner asserts to be found in *Cousins* in view of *Lee*.

As shown above, none of *Cousins*, *Lee*, *McCanne*, or a combination thereof, teach or suggest all of the features of claims 11, 12, 28, and 29, at least by virtue of their dependency on the corresponding independent claims. Therefore, the proposed combination of these references when considered together as a whole does not teach or suggest all of the features of claims 11, 12, 28, and 29. For this reason, the cited art does not present a prima facie obviousness rejection against these claims.

VII.   35 U.S.C. § 103, Obviousness (Claims 13, 14, 30, and 31)

The Examiner has rejected claims 13, 14, 30, and 31 under 35 U.S.C. § 103 as being unpatentable over Cousins, in view of Lee, and further in view of Pulst et al., U.S. Patent Application Publication No. 2003/0212653. This rejection is respectfully traversed.

In rejecting the claims, the Examiner states:

> As to claims 13, 30, Cousins and Lee identifying similar blocks further includes:
> determining whether blocks have a specified number of matching features.
> However, Pulst teaches determining whether blocks have a specified number (i.e. classifiable features; [0046]; Fig. 20) of matching features (i.e. processing is performed by enriching the matrix with classes for the features while retaining the number of data records and compressing according to the classes, reducing the number of data records, [0008]).
> It would have been obvious to one of ordinary skill of the art having the teaching of Cousins, Lee and Pulst at the time the invention was made to modify the system of Cousins and Lee to include the limitations as taught by Pulst. One of ordinary skill in the art would be motivated to make this combination in order to take into account correlating instances of features and classes in enrichment and compression in view of Pulst ([0029]), as doing so would give the added benefit of performing a process by enriching the matrix with classes for the features while retaining the number of data records and compressing according to the classes, reducing the number of data records as taught by Pulst ([0008]).

Office Action dated January 11, 2007, p. 14.

The obviousness rejections are predicated upon the assertions made with respect to *Cousins* in view of *Lee*. As proved above, the underlying assertions made by the Examiner regarding *Cousins* in view of *Lee's* teachings are incorrect vis-à-vis the independent claims. For this reason, *Cousins* in view of *Lee* does not teach all of the features of claims 13, 14, 30, and 31, at least by virtue of their dependence on the independent claims. For the similar reasons, *Cousins* in view of *Lee* does not suggest all of the features of claims 13, 14, 30, and 31.

Additionally, *Pulst* does not teach or suggest the claim features shown to be deficient from *Cousins* in view of *Lee*. The Examiner does not assert otherwise. Instead, *Pulst* is cited only for disclose the claim features of claims 13, 14, 30, and 31. *Pulst* is wholly unrelated to the inventions of the independent claims and, accordingly, is wholly unrelated to claims 13, 14, 30, and 31. *Pulst* is devoid of disclosure regarding the feature the Examiner asserts to be found in *Cousins* in view of *Lee*.

As shown above, none of *Cousins*, *Lee*, *Pulst*, or a combination thereof teach or suggest all of the features of claims 13, 14, 30, and 31, at least by virtue of their dependency on the corresponding independent claims. Therefore, the proposed combination of these references when considered together as a whole does not teach or suggest all of the features of claims 13, 14, 30, and 31. For this reason, the cited art does not present a prima facie obviousness rejection against these claims.

VIII. Conclusion

It is respectfully urged that the subject application is patentable over the cited references and is now in condition for allowance.

The Examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the Examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

DATE: June 13, 2011

Respectfully submitted,

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